

Department of Chemistry & Physics

SCI 2010. BASIC CONCEPTS OF PHYSICAL SCIENCE II. (3-3-0). Basic concepts of astronomy and earth science, selected topics from contemporary science. Prerequisite: 1020. (May not receive credit for both Science 2010 and Chemistry 1040.)

Text Integrated Elements and Dept. Chem, Custom Edition for NSU
Ludu; Pearson Publishing

Course Content

1. Atmosphere and Hydrosphere
 - a. The atmosphere
 - b. Weather
 - c. Climate
 - d. Hydrosphere
2. The Rock Cycle
 - a. Minerals and rocks
 - b. Within the earth
 - c. Erosion
 - d. Vulcanism
3. The Evolving Earth
 - a. Tectonic movement
 - b. Plate tectonics
 - c. Methods of historical geology
 - d. Earth history
4. The Solar System
 - a. Solar family
 - b. Inner planets
 - c. Outer planets
 - d. Moon
5. The Stars
 - a. Tools of astronomy
 - b. The Sun
 - c. Stars
 - d. Life histories of the stars
6. The Universe
 - a. Galaxies
 - b. The expanding universe
 - c. Origin and future of the universe

Course Goals

This course is intended:

1. To introduce the student to basic concepts of meteorology, geology, and astronomy.
2. To introduce the scientific method as it applies to these fields.
3. To describe current research and recent discoveries in these fields.
4. To encourage the student to relate information taught in the course to everyday experiences.
5. To explore the limitations of scientific knowledge.

Course Objectives

The student who successfully completes this course should be able:

1. To predict general weather trends.
2. To explain the relationship and importance between CFCs, the ozone hole, and ultraviolet sunlight.
3. To explain the relationship between carbon dioxide and global warming.
4. To identify the common minerals and rocks.
5. To describe the theory of plate tectonics and explain its relation to earthquakes and volcanoes.
6. To explain the causes of seasons, phases of the Moon, eclipses, and tides.
7. To name and describe the nine planets of the solar system.
8. To describe the life cycle of a star.
9. To explain briefly how distances to astronomical bodies (stars, galaxies) are measured.
10. To explain how the Big Bang theory relates to the expanding universe and the estimated age of the universe.

It is the policy of NSU to accommodate students with disabilities, pursuant to federal law, state law, and the University's commitment to equal educational opportunities. Any student with a disability, who needs accommodation, for example in seating placement or in arrangements for examinations, should inform the instructor at the beginning of the course. Students with disabilities are encouraged to contact Disability Services, which is located in Kyser Hall, room 237, telephone 357-6950 or (TTD) 357-4393 or disability@nsula.edu.

